HSI GEOTRANS
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February 1, 1999

Lockheed Martin Corporation
West Coast Project Office
2550 N. Hollywood Way, 3rd Floor
Burbank, California 91505

Attention: Mr. John Hemmans
Project Coordinator

Subject: December 1998 Data Report
Water Supply Contingency Plan
Production Well Sampling Program
Crafton-Redlands Plume Project

Dear Mr. Hemmans:

This report presents a summary of field procedures, protocols, and results of the Water Supply Contingency Plan production well sampling for the month of December 1998. The Water Supply Contingency Plan (WSCP) was prepared by Lockheed Martin Corporation and submitted to the State of California Regional Water Quality Control Board (RWQCB) Santa Ana Region on September 30, 1996. The plan was conditionally approved by the RWQCB in a letter dated March 6, 1997. The WSCP for the Crafton-Redlands Plume was prepared to address maintenance of water supply to purveyors in the event that wells became impacted with trichloroethene (TCE) from the Crafton-Redlands TCE Plume. A summary of key dates and WSCP sampling program evolution is provided on Table 1.

The locations of the WSCP wells and analytical results for the December 1998 sampling event for TCE and perchlorate are shown on Figures 1 and 2, respectively. Table 2 presents a summary of analytical tests performed on each WSCP well and water system sampling points. The sampling frequency of each well is once a month for the first year. More frequent sampling, if required, is based on the analytical results as outlined in the WSCP TCE and perchlorate decision matrices, provided as Figures 3 and 4, respectively. The perchlorate decision matrix was presented in the *Perchlorate Work Plan and Schedule*, which was submitted, to the RWQCB on August 15, 1997. The RWQCB approved the Perchlorate Work Plan on

October 31, 1997. Table 3 presents a summary of the wells sampled twice monthly according to the decision matrices.

RESULTS

A summary of the analytical results for the December 1998 WSCP sampling event for TCE and perchlorate is shown on Figures 1 and 2, respectively and presented on Table 4. Available groundwater elevation data measured by purveyor personnel is provided on Table 5. Chain-of-custody and laboratory data sheets are in Attachment B and Level III QA/QC documentation is in Attachment C. Appendices A, B, and C are available upon request.

Trichloroethene

Trichloroethene was detected at or above the detection limit of 0.5 μg/L in six wells and two water system sampling points including; COLL Mountain View #1 (1.4 μg/L), Richardson #2 (1.1 μg/L), Gage 27-1 (7.8 μg/L), Gage 27-2 (0.97 μg/L), Gage 92-1 (0.50 μg/L), and Gage 6 New (1.8 μg/L), Iowa Booster (0.80 μg/L), and Gage Delivery (0.61 μg/L) as shown on Figure 1 and Table 4.

Groundwater samples collected from the remaining WSCP wells and system sampling points including: eight Gage wells (Gage 29-1, Gage 30-1, Gage 46-1, Gage 51-1, Gage 56-1, Gage 66-1, Gage 92-2, and Gage 92-3), three COLL wells (Mountain View #2, Richardson #1, and Richardson #3), the SCE #2 (AUX) well, one City of Riverside water system sampling point (7th & Chicago), one irrigation sampling point (Gage Arlington), and three City of Loma Linda sampling points (Mountain View Blend – Timoteo, Mountain View Blend – Lawton, and Richardson Blend) did not detect TCE. The trip blanks were also below the detection limit for TCE.

According to the TCE decision matrix (Figure 3), if a well meets or exceeds 2/5th of the MCL for TCE and the TCE is a result of the Crafton-Redlands Plume, a confirmation sample will be collected during the next regularly scheduled sampling of that well. If the result is confirmed, the well will then be sampled on a twice-monthly basis for three months. At the conclusion of three months, if the average TCE concentration is below 2/5th of the TCE MCL (i.e., 2.0 μg/L) the well will be sampled once a month. If the average TCE concentration is greater than 2/5th of the TCE MCL, then, the well will continue to be sampled on a twice-monthly basis for another three months.

If a well meets or exceeds the MCL for TCE, and the TCE is a result of the Crafton-Redlands Plume, two confirmation samples will be collected within 48 hours. If the results are confirmed, temporary corrective action will be implemented. One groundwater sample collected in December from Gage 27-1 (7.8 μg/L) exceeded

the MCL for TCE of 5.0 μg/L or 2/5th the MCL for TCE (2.0 μg/L). The TCE impacts at Gage 27-1 are attributed to the Norton AFB plume, thus more frequent TCE sampling will not be implemented.

Perchlorate

The perchlorate decision matrix states that if perchlorate is detected in any well at or above the PAL of 18 μg/L for the first time, two confirmation samples will be collected within 48 hours of receipt of results. If the perchlorate result is confirmed the purveyor, the RWQCB, and the DHS will be notified. If perchlorate is detected in any well at or above 75 percent of the PAL of 18 μg/L (i.e. 13.5 μg/L) for the first time, a confirmation sample will be collected during the next regularly scheduled sampling event. If the result is confirmed, the well will be sampled on a twice-monthly basis for three months. At the conclusion of three months if the average concentration of perchlorate is below 75 percent of the perchlorate PAL (i.e., 13.5 μg/L) the well will then be sampled once a month. If the average perchlorate concentration is greater than 75 percent of the perchlorate PAL, then, the well will continue to be sampled on a twice-monthly basis for another three months.

In December 1998, perchlorate was detected at or above the detection limit of 4μ g/L in three COLL wells (Mountain View #1, Mountain View #2, and Richardson #2), two COLL water system sampling points (Mountain View Blend at Lawton and Mountain View Blend at Timoteo), eight City of Riverside Gage wells (Gage 27-1, Gage 27-2, Gage 29-1, Gage 46-1, Gage 51-1, Gage 66-1, Gage 92-1, and Gage 6 New) as presented on Figure 2 and Table 4.

In the December WSCP sampling, perchlorate was detected at or above 75 percent (13.5 μg/L) of the PAL in four wells (COLL Mountain View #1, COLL Mountain View #2, COLL Richardson #2 and Gage 6 New). Mountain View #1 and Gage 6 New are no longer used as potable sources of water and will no longer be sampled under the WSCP sampling program. Mountain View #2 is currently being sampled on a twice a month basis. The monthly sample collected from COLL Richardson #2 on December 1, 1998 detected perchlorate at a concentration (23 μg/L) above the PAL. As per the perchlorate decision matrix, on December 15, 1998, a confirmation sample was collected from Richardson #2 and submitted to Del Mar and a split submitted to Babcock. The confirmation sample results were below the perchlorate PAL and below 75 percent of the perchlorate PAL (7.7. μg/L and 8.0 μ g/L for Del Mar and Babcock, respectively). Thus, the perchlorate result was not confirmed and the well will be continued to be sampled once a month. Gage 29-2 and Gage 29-3 were off-line during November and were not sampled.

Perchlorate: Twice-Monthly Sampling Evaluation

In accordance with the perchlorate decision matrix (Figure 4), if perchlorate is detected in any well at or above 75 percent (13.5 μg/L) of the PAL, and the concentration is confirmed, the well is to be sampled on a twice-monthly basis (if active) for a period of three months. If at the conclusion of the three-month sampling cycle, the average perchlorate concentration is greater than or equal to 75 percent of the PAL, then the well will continue to be sampled on a twice-monthly basis for the next three-month sampling cycle. If the average perchlorate concentration is less than 75% of the PAL, then the well will be sampled once a month.

The three-month twice-monthly sampling cycle concluded on December 31, 1998. During the past three months (October 1 through December 31, 1998), the average perchlorate concentrations for the wells sampled on a twice-monthly basis are presented on Table 6. Three wells are currently being sampled on a twice a month basis, if active (Gage 29-2, Gage 29-3, and COLL Mountain View #2).

Four samples were collected from Gage 29-2 during the October 1 through December 31, 1998 three-month sampling cycle because the well was off-line part of the time. The average perchlorate concentration for samples collected from Gage 29-2 is 20.0 μg/L, thus Gage 29-2 will continue to be sampled on a twice-monthly basis, if active.

Gage 29-3 was not sampled during the October 1 through December 31, 1998 three-month sampling cycle because the well was off-line. The average perchlorate concentration for the previous three-month sampling cycle July 1 through September 30, 1998 was 37.8 μg/L, thus Gage 29-3 will continue to be sampled on a twice-monthly basis, if active.

A total of 13 samples were collected from the COLL Mountain View #2 between October 1 and December 31, 1998. Eight samples from Mountain View #2 were analyzed at Del Mar and five samples were split among Babcock and the DHS. The average perchlorate concentration for 13 samples analyzed at Del Mar and Babcock from COLL Mountain View #2 between October and December 1998 is 16.2 μg/L (Table 6) thus Mountain View #2 will continue to be sampled on a twice-monthly basis.

CLOSING

COLL Mountain View #1 will be sampled upon request from the COLL because it is no longer used for potable distribution. Gage 6 New will no longer be sampled as part of the WSCP sampling program because it is no longer used for potable use. In accordance to the perchlorate decision matrix, beginning in January 1999, four City

of Redlands wells (COR Church Street, COR #38, COR Mentone Acres, and COR Orange Street) will be sampled on a quarterly basis (every three months) for perchlorate. The Gage Arlington irrigation sampling point will be analyzed for perchlorate only.

HSI GeoTrans greatly appreciates being of continued service to Lockheed Martin Corporation on this project. Should you have any questions or comments, please do not hesitate to call.

Sincerely,
HSI GEOTRANS

Roy J. Marroquin
Project Manager

James C. Norman, R.G., C.HG.
Project Director

TABLES

TABLE 1

KEY PROJECT DATES AND WSCP SAMPLING PROGRAM EVOLUTION

September 30, 1996, Lockheed Martin submitted the Water Supply Contingency Plan (WSCP) to the RWQCB – Santa Ana Region;
March 6, 1997, the RWQCB conditionally approved the WSCP, which included sampling eight production wells (City of Loma Linda Richardson #1, Richardson #2, Mountain View #1, Mountain View #2, Victoria Farms Mutual Water Company Wells #1 and #3, and Southern California Edison #1 and #2);
June 1997, Victoria Farms Mutual Water Company was connected to City of San Bernardino Water. Pumping ceased at VFMWC #1 and #3, and the two wells were removed from the program;
June 1997, sampling of SCE #1 was discontinued due to sampling logistics. The WSCP consists of five wells, including COLL Mountain View #1 and #2, COLL Richardson #1 and #2, and SCE #2 (AUX);
August 1997, the WSCP was expanded due to the detection of perchlorate in municipal supply wells in the Bunker Hill Basin. Twenty-six wells were added to the WSCP including nineteen City of Riverside wells, five City of Redlands wells, and two Loma Linda University wells, for a total of 31 wells;
October 1997, three City of Riverside water system sampling points were added to the WSCP, including the Gage system pipeline (Gage Delivery), the Waterman system pipeline (Iowa Booster), and the sampling station measuring outflow from the Linden and Evans Reservoirs (7th & Chicago);
March 1998, two City of Loma Linda water system sampling points were added to the WSCP, including the Mountain View system pipeline (Mountain View Blend at Lawton) and the Richardson system pipeline (Richardson Blend);
June 1998, one City of Riverside irrigation water system sampling point (Gage Arlington) and one additional City of Loma Linda water system sampling point (Mountain View Blend at Timoteo) were added to the WSCP.
December 1998, COLL Richardson #3 Well Added to WSCP Sampling Program.

TABLE 2

WSCP PRODUCTION WELL SAMPLING PROGRAM

HSI#	Well Name	Perchlorate	TCE
City of Loma Linda			
691	Mountain View #1	X	X
692	Mountain View #2	X	X
693	Richardson #1	X	X
694	Richardson #2	X	X
707	Richardson #3	X	X
City of Loma Linda Water System Sampling Points			
2967	Mountain View Blend - Lawton	X	X
3016	Mountain View - Timoteo	X	X
2968	Richardson Blend	X	X
Southern California Edison			
554	SCE#2(AUX)	X	X
Loma Linda University			
267	LLUniv Anderson #2	X	
717	LLUniv Anderson #3	X	
City of Riverside (Gage System)			
252	Gage#26-1	X	X
258	Gage#27-1	X	X
259	Gage#27-2	X	X
260	Gage#29-1	X	X
219	Gage#29-2	X	X
220	Gage#29-3	X	X
218	Gage#30-1	X	X
214	Gage#31-1	X	X
215	Gage#46-1	X	X
253	Gage#51-1	X	X
216	Gage#56-1	X	X
257	Gage#66-1	X	X
644	Gage#92-1	X	X
641	Gage#92-2	X	X
642	Gage#92-3	X	X
645	Gage 6New	X	X
City of Riverside (Waterman System)			
273	Hunt#6	X	
271	Hunt#10	X	
272	Hunt#11	X	
City of Riverside Water System Sampling Points			
2946	Iowa Booster (Waterman)	X	X
2947	Gage Delivery (Gage)	X	X
2948	7th & Chicago (Reservoir)	X	X
3018	Gage Arlington	X	X
City of Redlands			
542	COR Church St	X	
2673	COR#38	X	
535	COR Mentone Acres	X	
29	COR Orange st	X	
74	CORRees	X	X

Notes:

TCE = Trichloroethene

Perchlorate analyzed using DHS Method (EPA 300.0 Modified)

TCE analyzed using EPA Method 502.2

TABLE 3

WSCP PRODUCTION WELL SAMPLING PROGRAM
DECEMBER 1998 WELLS SAMPLED TWICE MONTHLY

HSI#	Well Name	Perchlorate	TCE
City of Loma Linda			
692	Mountain View #2	X	
City of Riverside (Gage System)			
219	Gage #29-2	X	
220	Gage #29-3	X	

Notes:

TCE = Trichloroethene

Perchlorate analyzed using DHS Method (EPA 300.0 Modified).

TCE analyzed using EPA Method 502.2.

In December, Gage 29-2 and Gage 29-3 were not sampled because the wells were off-line.

TABLE 4
WSCP PRODUCTION WELL SAMPLING PROGRAM
DECEMBER 1998 DATA RESULTS

HSI#	Well Name	Sample Date	Perchlorate (ppb) Del Mar	TCE (ppb) Del Mar
City of Loma Linda				
691	Mountain View #1[a]	12/1/98	26	1.4
692	Mountain View #2	12/1/98	8.5	ND(0.5)
692	Mountain View #2 - Split (BAB)	12/1/98	5.0	NA
692	Mountain View #2*	12/15/98	25	NA
692	Mountain View #2 - Split (BAB)*	12/15/98	20	NA
692	MUN -725	12/15/98	25	NA
693	Richardson #1	12/1/98	ND(4)	ND(0.5)
694	Richardson #2	12/1/98	23	1.1
694	Richardson #2	12/15/98	7.7	NA
694	Richardson #2 - Split (BAB)	12/15/98	8.0	NA
707	Richardson #3	12/1/98	ND(4)	ND(0.5)
City of Loma Linda Water System Sampling Points				
2967	Mountain View Blend-Lawton	12/1/98	14	ND(0.5)
3016	Mountain View Blend-Timoteo	12/1/98	5.2	ND(0.5)
2968	Richardson Blend	12/1/98	ND(4)	ND(0.5)
Southern California Edison				
554	SCE#2(AUX)	12/1/98	ND(4)	ND(0.5)
Loma Linda University				
267	LLUniv Anderson #2	NS	NS	NS
717	LLUniv Anderson #3	NS	NS	NS
City of Riverside (Gage System)				
252	Gage#26-1	NS	NS	NS
258	Gage#27-1	12/2/98	4.4	7.8
259	Gage#27-2	12/2/98	6.5	0.97
260	Gage#29-1	12/2/98	7.6	ND(0.5)
219	Gage#29-2	NS	NS	NS
219	Gage 29-2*	NS	NS	NS
220	Gage#29-3	NS	NS	NS
220	Gage#29-3*	NS	NS	NS
218	Gage#30-1	12/2/98	ND(4)	ND(0.5)
214	Gage#31-1	NS	NS	NS
215	Gage#46-1	12/2/98	6.1	ND(0.5)
253	Gage#51-1	12/2/98	9.8	ND(0.5)
216	Gage#56-1	12/2/98	ND(4)	ND(0.5)
257	Gage#66-1	12/2/98	9.7	ND(0.5)
644	Gage#92-1	12/2/98	8.9	0.50
644	MUN-723	12/2/98	8.9	0.52
641	Gage#92-2	12/2/98	ND(4)	ND(0.5)
642	Gage#92-3	12/2/98	ND(4)	ND(0.5)
645	Gage 6 New[a]	12/2/98	40	1.8
City of Riverside (Waterman System)				
273	Hunt#6	NS	NS	NA
271	Hunt#10	NS	NS	NA
272	Hunt#11	NS	NS	NA
City of Riverside Water System Sampling Points				
2946	Iowa Booster (Waterman)	12/3/98	ND(4)	0.80
2947	Gage Delivery (Gage)	12/3/98	ND(4)	0.61
2948	7th & Chicago (Reservoir)	12/3/98	ND(4)	ND(0.5)
3018	Gage Arlington	12/3/98	ND(4)	ND(0.5)
City of Redlands				
542	COR Church St	NS	NS	NA
2673	COR#38	12/3/98	ND(4)	NA
2673	MUN-724	12/3/98	ND(4)	NA
535	COR Mentone Acres	NS	NS	NA
29	COR Orange St	12/3/98	ND(4)	NA
74	COR Rees	NS	NS	NS

Notes:

* = Twice-monthly sampling result

[a] = Well not used for potable distribution

NA = Not analyzed for that compound

NS = Not sampled (Well off-line)

ND(4) = Not detected at the specified limit

MUN = Duplicate sample collected from the well listed directly above

TCE = Trichloroethene

DEL MAR = Del Mar Analytical Laboratory of Irvine, CA

BAB = Babcock & Sons Laboratory of Riverside, CA

Perchlorate analyzed using DHS Method (EPA 300.0 Modified)

TCE analyzed using EPA Method 502.2

TABLE 5

SUMMARY OF WATER LEVEL MEASUREMENTS
DECEMBER 1998 SAMPLING EVENT

HSI#	Well Name	Measure Date	Depth to Water	Measuring Point Elevation	Groundwater Elevation	Comments
CITY OF LOMA LINDA						
691	Mountain View #1	NM	NM	1095	NM	Static
692	Mountain View #2	12/07/98	146	1085	939	Static
693	Richardson #1	12/07/98	134	1077	943	Static
694	Richardson #2	12/07/98	122	1078	956	Static
707	Richardson #3	12/07/99	140	NA	NA	Static
Southern California Edison						
554	SCE#2(AUX)	NM	NM	1100.00	NM	Pumping
Loma Linda University						
267	LLUniv Anderson #2	NM	NM	1075	NM	Pumping
717	LLUniv Anderson #3	NM	NM	1070	NM	Pumping
City of Riverside (Gage System)						
252	Gage#26-1	12/01/98	79.0	1045.33	966.33	Static
258	Gage#27-1	12/01/98	90.0	1044.64	954.64	Pumping
259	Gage#27-2	12/01/98	91.0	1044.64	953.64	Pumping
260	Gage#29-1	12/01/98	85.5	1044.43	958.93	Pumping
219	Gage#29-2	12/01/98	61.0	1046.31	985.31	Static
220	Gage#29-3	12/01/98	73.0	1048.75	975.75	Static
218	Gage#30-1	12/01/98	165.0	1054.17	889.17	Pumping
214	Gage#31-1	12/01/98	72.5	1054.64	982.14	Static
215	Gage#46-1	12/01/98	128.0	1065.50	937.50	Pumping
253	Gage#51-1	12/01/98	163.0	1044.64	881.64	Pumping
216	Gage#56-1	12/01/98	161.0	1065.50	904.50	Pumping
257	Gage#66-1	12/01/98	124.0	1044.85	920.85	Pumping
644	Gage#92-1	12/01/98	162.0	1047.78	885.78	Pumping
641	Gage#92-2	12/01/98	186.0	1053.38	867.38	Pumping
642	Gage#92-3	12/01/98	169.0	1058.78	889.78	Pumping
645	Gage 6 New	12/01/98	109.0	1067.70	958.70	Pumping
City of Riverside (Waterman System)						
273	Hunt#6	NM	NM	1015.5	NM	Pumping
271	Hunt#10	NM	NM	1017	NM	Pumping
272	Hunt#11	NM	NM	1015.7	NM	Pumping
City of Redlands						
542	COR Church St	Nov-98	93.0	1344.8	1251.8	Static
2673	COR#38	Nov-98	96.0	NA	NA	Pumping
535	COR Mentone Acres	Nov-98	143.0	1506.4	1363.4	Static
29	COR Orange st	Nov-98	114.0	1282	1168.0	Pumping
74	COR Rees	Nov-98	187.0	1490	1303.0	Static

Notes:

All measurements reported in feet below measuring point (ft-bmp)

Water level measurements for all City of Loma Linda, City of Riverside, and City of Redlands wells were obtained by purveyor personnel.

Elevations given in feet above mean sea level (ft-msl)

NM=Not measured

NA=Data not available

Static water levels were allowed to recover a minimum of 30 minutes to obtain a static water level measurement

TABLE 6

TWICE MONTHLY SAMPLING PROGRAM
THREE MONTH DATA AND AVERAGE
PERCHLORATE CONCENTRATIONS

Well Name	Sample Date	Sample Result	75% of PAL	PAL
Gage29-2	9/8/98	19	13.5	18
Gage29-2	9/18/98	22	13.5	18
Gage29-2	10/2/98	22	13.5	18
Gage29-2	11/16/98	17	13.5	18
Average 10/1/98 - 12/31/98 *		**20.0**		
Gage29-3	Not Sampled Between 10/1/98 and 12/31/98			
COLL Mountain View #2	10/1/98	23	13.5	18
COLL Mountain View #2	10/5/98	15	13.5	18
COLL Mountain View #2	10/15/98	28	13.5	18
COLL Mountain View #2	10/22/98	28	13.5	18
COLL Mountain View #2	10/22/98	34	13.5	18
COLL Mountain View #2	11/3/98	9.6	13.5	18
COLL Mountain View #2	11/3/98	9	13.5	18
COLL Mountain View #2	11/16/98	6.1	13.5	18
COLL Mountain View #2	11/16/98	ND(4)	13.5	18
COLL Mountain View #2	12/1/98	5	13.5	18
COLL Mountain View #2	12/1/98	8.5	13.5	18
COLL Mountain View #2	12/15/98	25	13.5	18
COLL Mountain View #2	12/15/98	18	13.5	18
Average 10/1/98 - 12/31/98		**16.2**		

Notes:

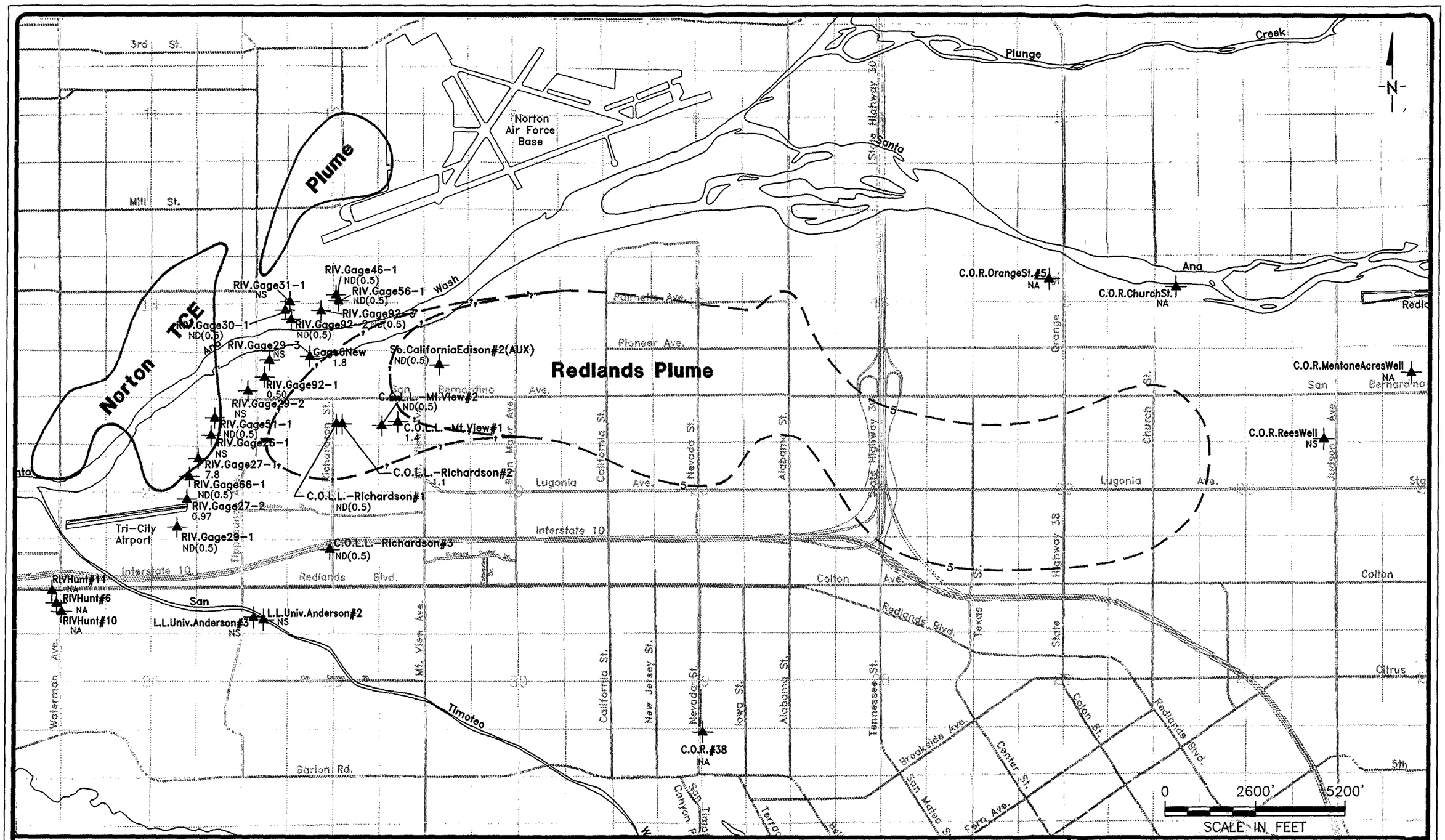
* Well sometimes off-line between 10/1/98 - 12/31/98

All concentrations are micrograms per liter.

PAL = Provisional Action Level for perchlorate

Half the detection limit was used to average the perchlorate concentration of Mountain View #2

FIGURES



EXPLANATION

- Wells Currently Sampled Under the Existing WSCP Sampling Program
- 2.2 TCE Results (µg/L)
- Approximate TCE Plume Location 5 µg/L (1998 Interpretation of Redlands Plume)
- Approximate TCE Plume Location 5 µg/L (1998 Interpretation of Norton AFB Plume, by Norton)
- Projected 5 µg/L TCE Contour in Hydrostratigraphic Unit 2
- Projected 5 µg/L TCE Contour in Hydrostratigraphic Unit 4

- ND(0.5) Not Detected at Indicated Detection Limit
- NS Not Sampled
- NA Not Analyzed

- *ND(0.5) C.O.L.L. Mountain View Blend at Lawton
- ND(0.5) C.O.L.L. Mountain View Blend at Timoteo
- ND(0.5) C.O.L.L. Richardson Blend
- 0.80 Riv. Iowa Booster (Waterman)
- 0.61 Riv. Gage Delivery (Gage)
- ND(0.5) Riv. 7th + Chicago (Reservoir)
- ND(0.5) Gage Arlington (Irrigation)

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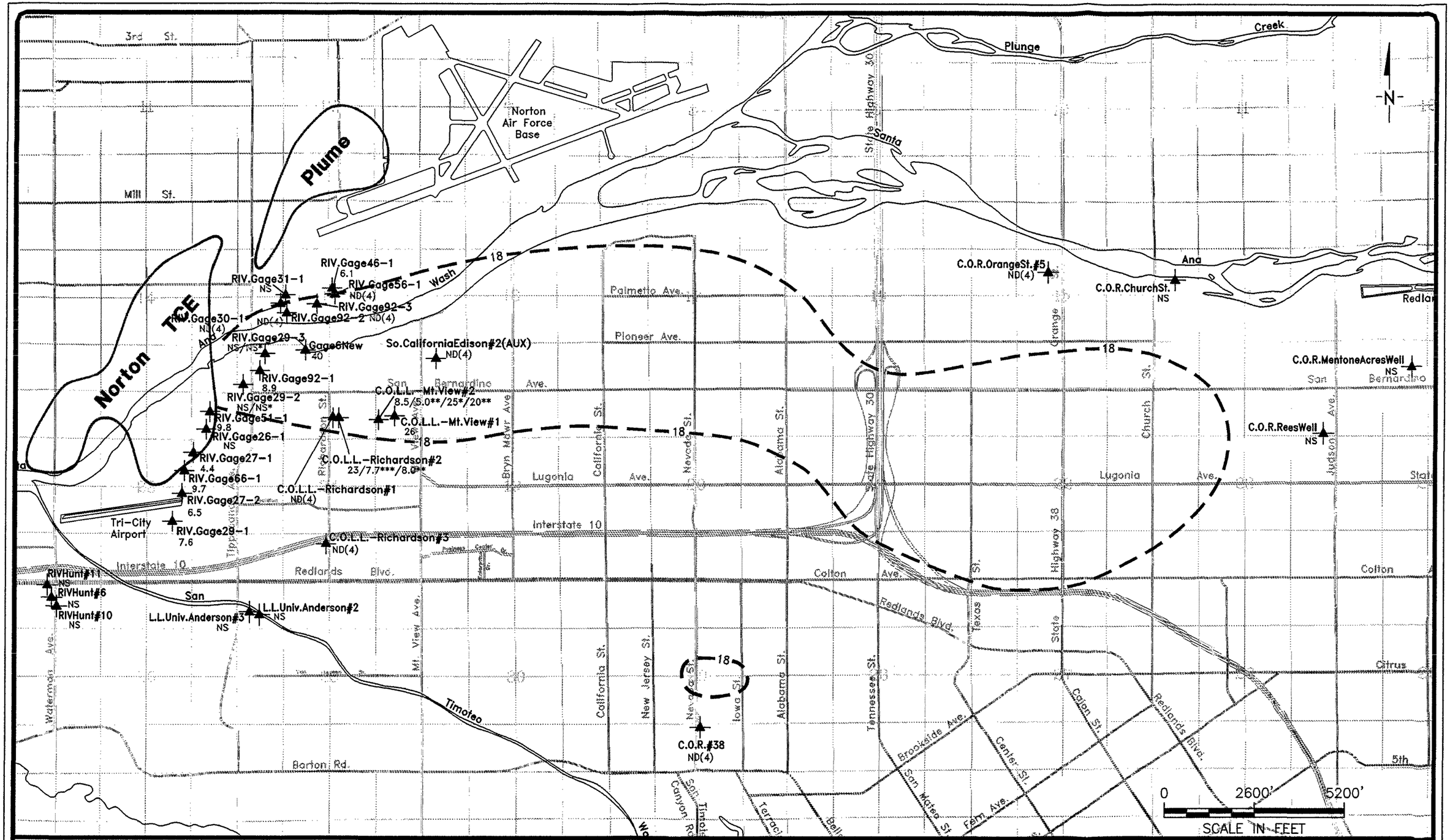
TITLE: WSCP Production Well Sampling Program
TCE Data Results December 1998

LOCATION: LOCKHEED MARTIN
REDLANDS, CALIFORNIA

HSI GEOTRANS
A TETRA TECH COMPANY

CHECKED:	Roy Marroquin
DRAFTED:	Hector Magaña
PROJ.:	N876-101
DATE:	01/06/99

FIGURE: 1



EXPLANATION

- Wells Currently Sampled Under the Existing WSCP Sampling Program
- —18— Approximate 18 µg/L Perchlorate Plume Location (1998 Interpretation)
- —5— Approximate TCE Plume Location 5 µg/L (1998 Interpretation of Norton AFB Plume, by Norton)

M:\redlands\view-graphs\71wi58-b.dwg

6.6	Perchlorate (µg/L) Results
ND(4)	Not Detected at Indicated Detection Limit
NS	Not Sampled
*	Twice-Monthly Sampling Result
**	Split Sample Result
***	Confirmation Sampling Result

5.2	C.O.L.L. Mountain View Blend – Timoteo
14	C.O.L.L. Mountain View Blend – Lawton
ND(4)	C.O.L.L. Richardson Blend
ND(4)	Riv. Iowa Booster (Waterman)
ND(4)	Riv. Gage Delivery (Gage)
ND(4)	Riv. 7th + Chicago (Reservoir)
ND(4)	Gage Arlington

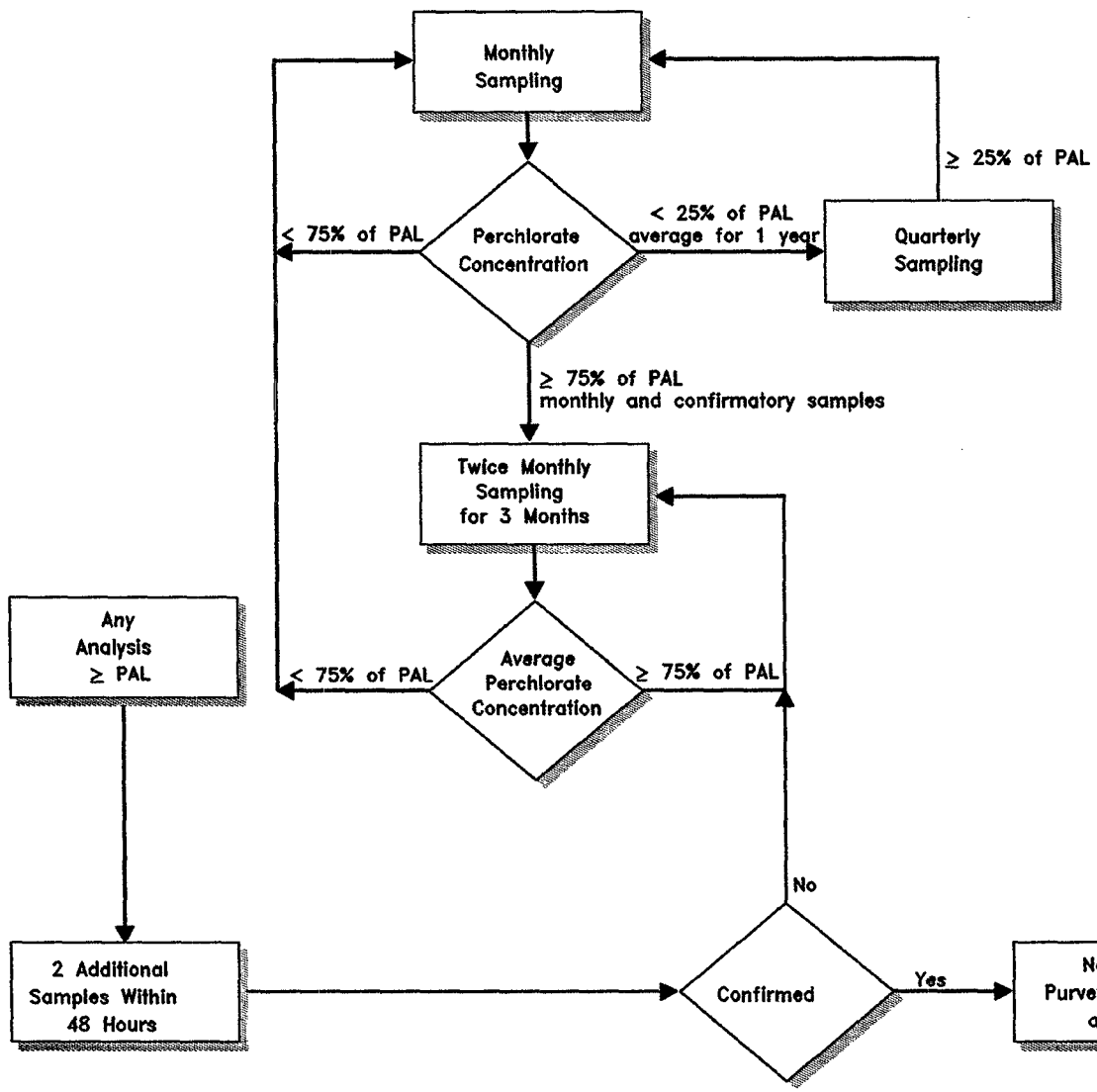
TITLE: WSCP Production Well Sampling Program
Perchlorate Data Results December 1998

LOCATION: LOCKHEED MARTIN
REDLANDS, CALIFORNIA

HSI GEOTRANS
A TETRA TECH COMPANY

CHECKED:	Roy Marroquin
DRAFTED:	Hector Magaña
PROJ.:	N876-101
DATE:	01/06/99

FIGURE: 2



Footnote:

Perchlorate Provisional Action Level (PAL) = 18 μg/L (California Department of Health Services, May 1997)

TITLE: Decision Matrix for Sampling Production Wells for Perchlorate

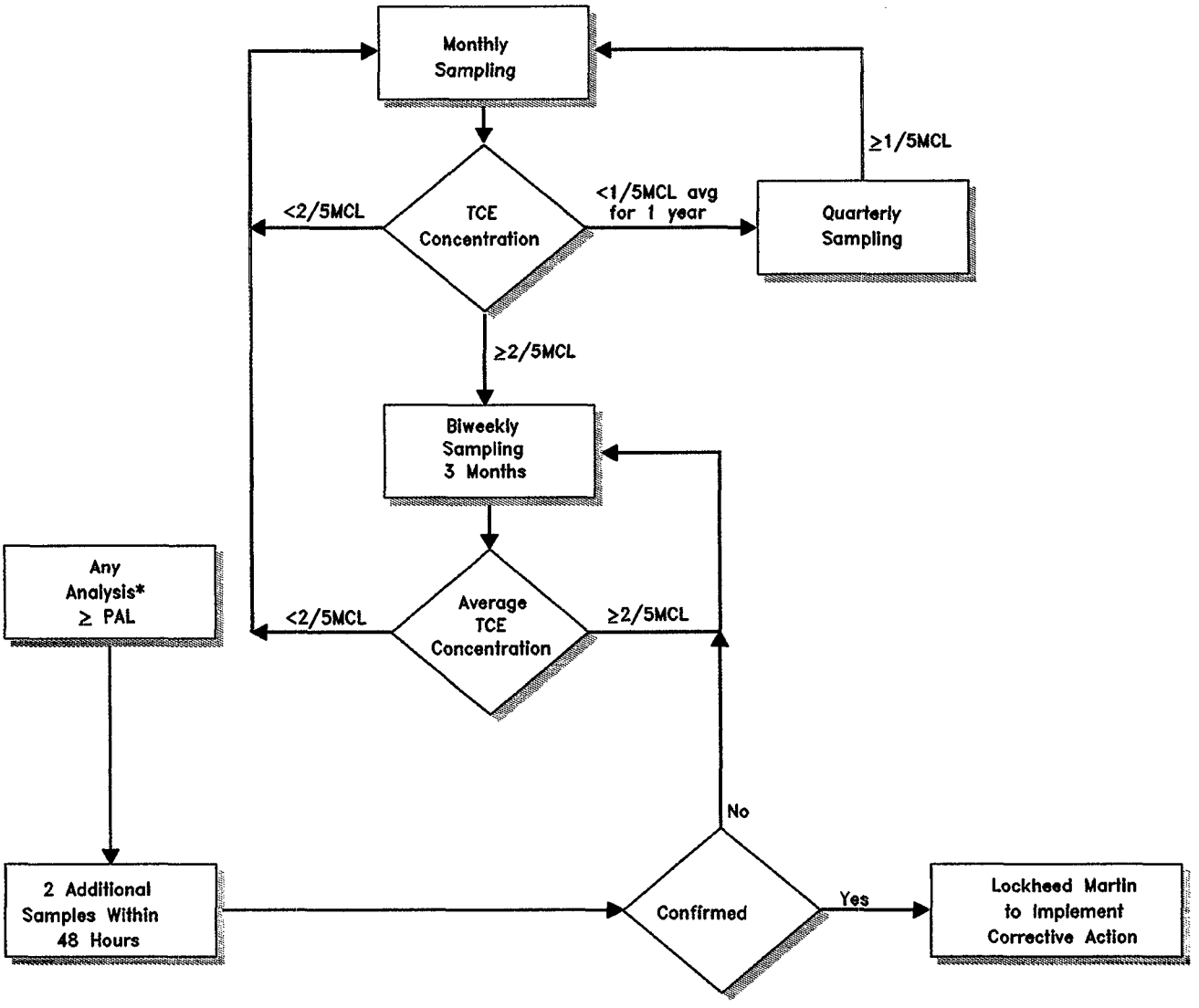
LOCATION: LOCKHEED MARTIN REDLANDS, CALIFORNIA

HSI GEOTRANS A TETRA TECH COMPANY

CHECKED:	Ron Bruns
DRAFTED:	Hector Magaña
PROJ.:	N876-101
DATE:	09/25/98

FIGURE: 3

M:\lockheed\WSCP\dmCl04a.dwg



Footnote:

* If, at a specific well, blending is occuring to provide acceptable water for compounds other than TCE, then no corrective action may be necessary as long as the concentration of TCE is less than 5.0 µg/L in the finished water.

TCE MCL = 5 µg/L (California Regulations, Title 22, Division 4, Chapter 15, Section 64444)

TITLE: Decision Matrix for Sampling of Production Wells for TCE from the Crafton-Redlands Plume

LOCATION: LOCKHEED MARTIN REDLANDS, CALIFORNIA

HSI GEOTRANS A TETRA TECH COMPANY

CHECKED:	Ron Bruns
DRAFTED:	Hector Magaña
PROJ.:	N876-101
DATE:	09/25/98

FIGURE: 4

M:\lockheed\WSCP\dm-prod3.dwg

ATTACHMENT A

GEOLIS FIELD FORMS

ATTACHMENT A

GEOLIS FIELD FORMS
(Available Upon Request)

ATTACHMENT B

CHAIN-OF-CUSTODY RECORDS AND LABORATORY DATA SHEETS

ATTACHMENT B

CHAIN-OF-CUSTODY RECORDS AND LABORATORY DATA SHEETS
(Available Upon Request)

ATTACHMENT C

LEVEL III
QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION

ATTACHMENT C

LEVEL III
QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION
(Available Upon Request)

Lockheed Martin Corporation
Corporate Environment, Safety & Health
West Coast Projects Office
2550 North Hollywood Way, 3rd Floor, Burbank, CA 91505-1055
Facsimile 818·847·0256 or 818·847·0170

LOCKHEED MARTIN

Via Federal Express
CAY0299/053
WBS# 48720

February 1, 1999

Mr. Gerard J. Thibeault
Executive Officer
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

Subject: **December 1998 Data Report**
Water Supply Contingency Plan
Production Well Sampling Program
Crafton-Redlands Plume Project

Dear Mr. Thibeault:

In compliance with the approved Water Supply Contingency Plan, enclosed please find one copy of the **December 1998, Production Well Sampling Program** report prepared by HSI-Geotrans for the Lockheed Martin Corporation. This report presents analytical results from samples collected at Bunker Hill Basin Production Wells in December of 1998. Laboratory Quality Assurance/Quality Control documentation is in Attachment C which is also enclosed for your review.

Should you have any questions, comments, or requests, please contact Tom Blackman at (818) 847-0791 or John Hemmans at (818) 847-0191.

Sincerely,

Carol A. Yuge

Carol A. Yuge
Director

Enclosures

cc: See Attached Distribution List

Distribution:

cc: (Abbreviated Report Without Attachments "A, B, & C" Which are Available Upon Request)
Kalyanpur Baliga, Department of Health Services (San Bernardino)
Tom Bartol, USAF, Norton Air Force Base
Henry Dennis, Mountainview Power Company
Dodie Farmer, Victoria Farms Mutual Water Company
Gary Forth, City of Loma Linda
Douglas Headrick, San Bernardino Valley Water Conservation District
Mike Huffstutler, City of Redlands
Ross Lewis, Gage Canal Company
Kevin Mayer, US EPA (Region IX)
Steve Mains, Western Municipal Water District
Morris Matson, Loma Linda University
Eugene McMeans, Riverside Highland Water Company
Zahra Panahi, City of Riverside
Dan Randall, City of Riverside
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